

Project Business Management¹

Are You Ready for Business Success as a Project Vendor? Here are some Tools for You

Oliver F. Lehmann

"Too swift arrives as tardy as too slow."
William Shakespeare



Summary

A vendor in project business typically has three major goals: Making customers happy, generating profit, and protecting the own liquidity. These goals must be achieved in a high risk environment. What tools are at hand for the vendor as an organization or an individual to achieve them?

The Boon and Bane of Project Business Management

The practices of Project Business Management can be successfully applied when there are at least two players in a project, a client and a vendor. Often, the number of players is much larger, when contractors create large networks with other suppliers that also act as contractors, or as subcontractors, consultants, and many more. All these companies have expectations what they want to gain from the business. One of these expectations is naturally to bring money home.

¹Editor's note: This series of articles is by Oliver Lehmann, author of the book "[Project Business Management](#)" (ISBN 9781138197503), published by Auerbach / Taylor & Francis in 2018.. See full author profile at the end of this article.

The following pages will describe the problems meeting that expectation and recommend tools to improve the monetary benefits from the project contract.

When you work for a vendor of services and products for one or more paying customers, or when you are a self-employed contractor as a one-person business, your job can be a highly profitable business. It can be financially rewarding.

If you are among those who say “By lifting others we are blessed”², it is also satisfying to see how one can help customers achieve their objectives, develop products or services, drive improvements and transformations that the client alone would be unable to do, and help companies be more innovative and survive in fast changing markets. For this group of people, the payment is not the singular purpose of their work, but the confirmation that it is done well and the necessary basis to secure the presence and build the future. The sense of achievement is clearly what drives many professionals, self-employed or inside vendor companies, and the profitability derived from projects and their contribution to the own liquidity is one of several success metrics.

These are the successful contractors.

However, there are also contractor companies that are doing much worse. I call them “JAMs” for “Just about managing” in my book “*Project Business Management*”³. They somehow get by with the day, but they are unable to build the reserves needed for growth and development and for coping with the potentially hurtful surprises that are part of project business and its temporary and ever unique nature. This “JAMming” may originate in dysfunctionalities on the side of the customer. There may also be shortcomings on the side of their subcontractors, or of course also inside the own organization.

Figure 1 shows the multitude of sources that can disrupt business for a contractor inside a project supply network (PSN), and in essence, they can be found at all players involved.

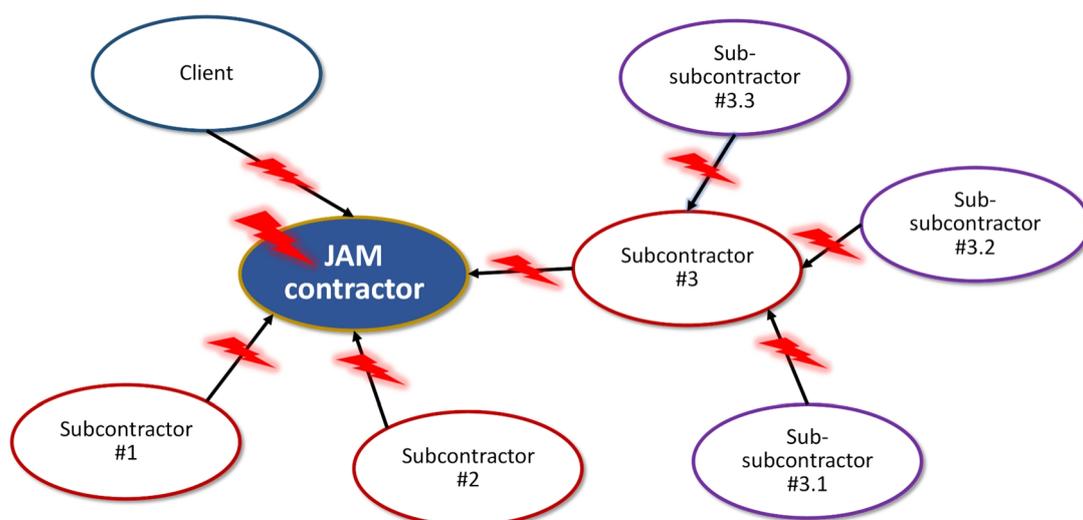


Figure 1: Sources of business disruption for a contractor in a project supply network (PSN) in project business

² (Ingersoll, 1902)

³ (Lehmann, 2018)

In project supply networks (PSNs), troubles of one organization can impact other players and like a complex system of rows of falling dominoes affect the entire project, possibly driving it and its contributing organizations into existential crisis.

Operational Supply Chains v. Project Supply Networks

In operations, particularly in production and services, there is a well established discipline called Supply Chain Management (SCM). SCM is taught in Academia and business training. It has a vast body of literature, own associations⁴, and special software that helps manage its complexity and dynamics. The discipline describes, how complex systems of supply chains are built, their performance tracked and influenced, and how these systems are changed when necessary. The discipline has become a central element of Just-in-Time production, which today spans over national economies, benefitting from frictionless cross-border traffic and international standardization in legal and technical matters. International treaties have opened up borders, created new jobs in distributed productions, and countries that wish to leave such treaties are facing harsh consequences for their economies.

The basic goal of the discipline of Supply Chain Management is ensuring predictability and order across companies and countries. In production, this predictability and order keeps the production line running, in trade of goods, it keeps the store shelves filled, and in services, it ensures that customers get attended as expected, even when the attending entity is not the one that is originally the customer's contract partner. This predictability and order is for the benefit of the customer, but also helps suppliers and service providers make long-term plans and balance the ratio of costs and of income in a way that allows for sustainable income.

Like it or not, predictability and order are among the greatest challenges in project management, which is rather driven by uniqueness of tasks and solutions, by the fleeting nature of the projects as temporary endeavors⁵, and by the continuous discovery of new knowledge, an often difficult process for all people involved. This ever-new knowledge may be relevant for the next moment, for the rest of the project, and sometimes for people's entire further lives. Project management is not engineer once and then keep running, it is a continuous learning process, which at least lasts as long as people actually practice it, often longer.

Figure 2 (page 4) shows, how the learning process coincides with two other processes that occur naturally in any project:

- The number of options for decision making is going down.

A common example is a solution to tight deadlines: Starting earlier. This is often the easiest and cheapest solution, but at a certain point is it too late to do that. A majority of projects is performed against one or more deadlines, and the more the project approaches a deadline, the less we have options that we can do in the remaining time.

⁴ An overview of the associations involved can be found in the Internet (SCM Portal, 2019).

⁵ (PMI, 2017, p. 4)

Another aspect is that projects are often done against budgets, and while the amount of residual money for the project gets smaller, the more shrinks the number of options that the team can afford to do.

- The remaining options get more and more expensive.

Decisions that must be made under time pressure tend to become more expensive than decisions made relaxed and after diligent exploration and deliberation of the various options at hand. Under time pressure, more errors are made, and those who sell their products and services know how to sell with express surcharges.

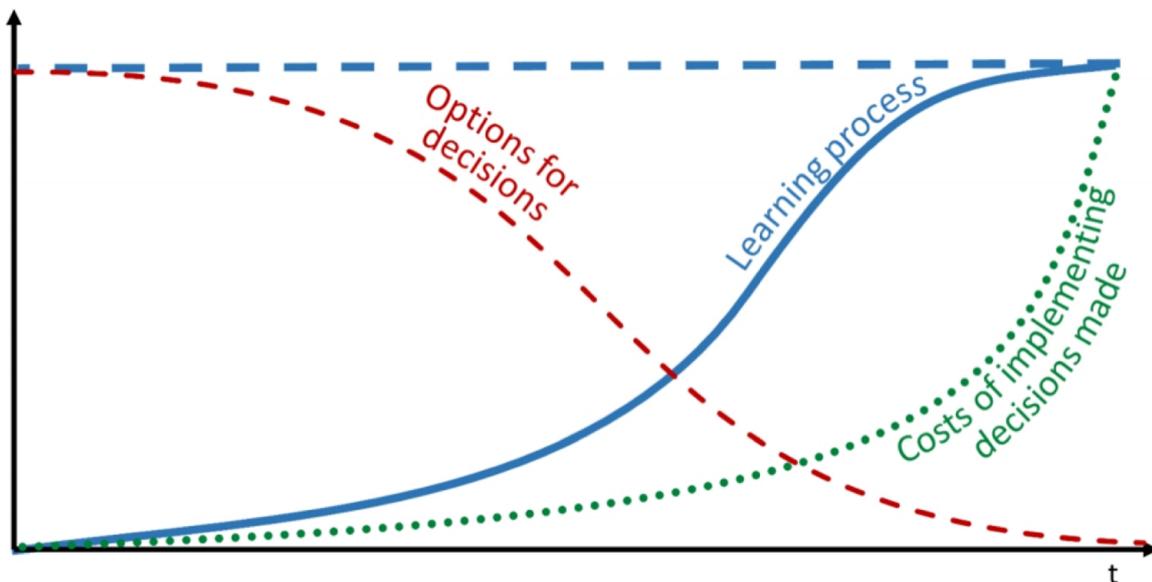


Figure 2: The learning process during a project concurs with a loss of options for decision making, and increasing costs of implementing the options that remain.

The dynamics of success and failure could not be more different. In the repetitive and optimizable world of operations management, supply chains are engineered just once and then, plans are just implemented. Replanning and improvisation are necessary from time to time, to bring adaptivity and agility into the overall process, but the intention is to keep it at a minimum and keep the system predictable.

In contrast, project supply networks follow the principles of the Gig economy: When a contractor is needed for a certain task, a vendor is selected, often out of a list of options in a competitive process, and when the task is finished, the contract is considered fulfilled and ended.

Figure 3 (page 5) illustrates some of the most common differences between operational supply chain management and the management of project supply networks, assuming for both that there is more than one vendor involved as a contractor: Once the supply chain system has been engineered, contracts negotiated and the system put into operations, there may be infrequent attempts for renegotiation and partial re-engineering, but apart from that, the system remains untouched for a long time. The fear that the running system may be disrupted from too much re-negotiation and change is just too big. In contrast, the building

the Project Supply Network is a standing process, bringing new vendors in and farewelling those, whose work has been finished.

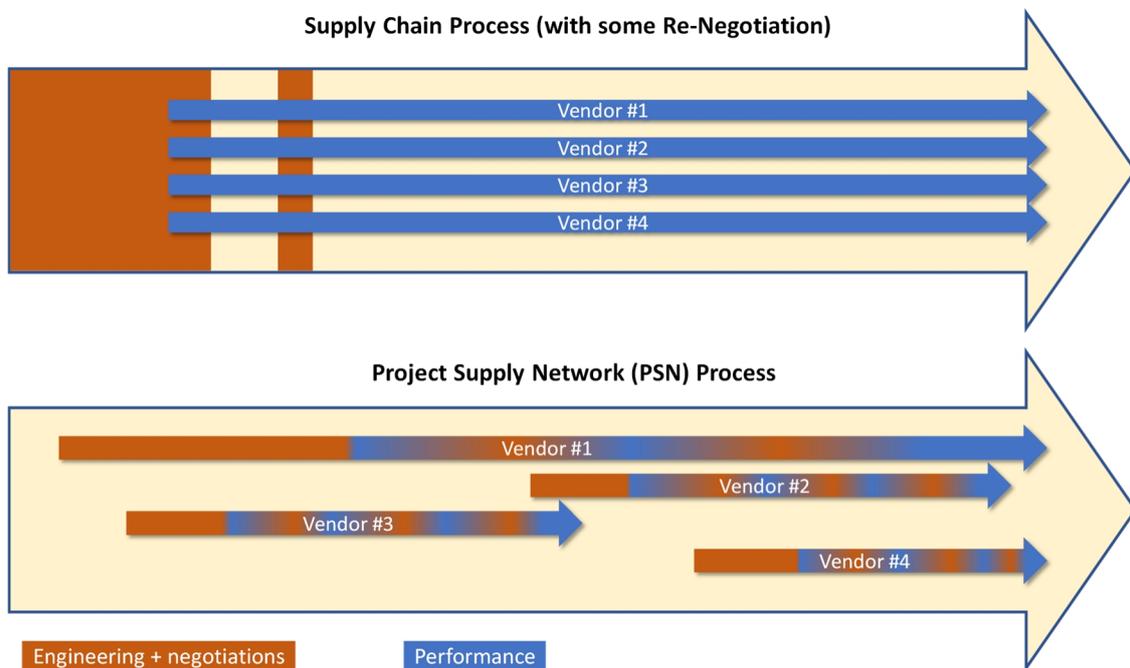


Figure 3: An operational supply chain contrasts with a project supply network (assuming a network with several project vendors selected as contractors)

Project Supply Network Uncertainties – Consequences for Project Vendors

The much lower predictability of the business done in project supply networks, compared with operational supply chains, makes it hard for project vendors to be sustainably profitable.

Here are some factors that add to this uncertainty:

- **The cost of developing the business:**
When one asks vendors about their hit rate for new customers, i.e. the percentage of project offers that lead to a contract, a common answer is 10%. This is independent of the industry. Some highly specialized companies have better hit rates, however companies offering commoditized standard solutions may have a lower one. 10% hit rate means, nine out of ten offers do not lead to a contract.
- **The need to bench people for uncertain business:**
Vendor companies commonly have a pipeline of projects in pre-award stage. Some of these offers will be accepted by the seller and become project contracts. In such case, they will immediately need their employees, but no one can clearly say, which offers will be successful, when this will happen, and whether it will happen at all. Until then, the vendor organizations have to pay these people, but cannot bill them to a customer. Benched resources are costly and it may be frustrating for the idle people involved.

- **The risk of overtaxing the portfolio:**
The hit rate is no fixed number. Instead, it is changing like the weather, going up and down often for no discernable reason. If the resources of a contractor are unable to cope with the work-load coming in, and if this is just a temporary problem, contractors are mostly able to cope with it. However, as there is long-term climate that is different from weather, some vendor companies consistently overtax their people and physical resources, wearing down people and equipment at the moment when they are needed most. When the sole focus is on winning the business, the consequence may be losing the people needed to do it.
- **The challenge for liquidity:**
As a contractor, one is commonly required to lay out money and work for the customer. One reason are payment terms, that require the contractor to give the customer a free credit for weeks, often months. Another reason is rather internal: The people used to work for the customer are required to report back home all information that can be a basis for invoicing. This may be billable times of work or the achievement of milestones that trigger invoices. When these reports come in late, the billing will be delayed too. The effect will be stretched credit lines of the contractor and in a worst case scenario, insolvency.
- **Working with strangers and organizations that are mostly not understood:**
This is a problem that all players in project business management are facing, customers and contractors: In contrast to internally performed projects that happen inside more or less well-known organizations and are mostly done by insiders, projects under contract require the cooperative work of organizations that don't know each other well. This is often true even after years of joint projects. As issues in one organization may translate into problems for others, as described before, and finally drive the project into crisis. Often, it would be valuable to know the other parties better and to understand how they make and implement their decisions.
- **Insufficient documentation:**
There are various reasons that documentation should be considered important for a contractual project, from ensuring timely payments, as discussed before, to their contribution to a corporate knowledge base for the vendor. One other reason is the threat of a potential court case that is a permanent Sword of Damocles hanging over a contractor's head. Such court cases are generally disadvantageous and should be avoided, but this may not be always possible. It is hard to make predictions for such cases, who will win, as at court and on high sea, one is "in the hands of God". One thing however is certain: When the documentation that supports the own position is poor, the case is much more likely to get lost. The party with the better documentation has much better chances to win. One may object that the majority of court cases on projects ends with a settlement, but even then, the poorer the documentation to support the own position, the weaker the position in negotiations will be and the more favorable the settlement will be for the other party.
- **Insufficient education for project business:**
Like it or not, most project managers are poorly educated for the job. They began as "accidental project managers" and remained that for years. Many claim that

experience can make up for a lack of education, however, experience is limited to what these people came into contact with during their career. This may not be enough to do project management effectively. Now add the needs to manage the commercial and legal aspects of project business management, and the different dynamics of social and interpersonal relationships, and it gets clear, why many project managers do not perform as expected.

This list of causes of uncertainty for project vendors is not complete. One should remain aware, that these are not some minor issues that can be easily managed during the course of the project. For a vendor of project services and products, these factors directly impact the bottom line of the organization, financially but also in regards of customer satisfaction, the final justification for the vendor to exist.

For the vendor, *Customer satisfaction*, *Profitability*, and *Liquidity* mark the corners of the magic success triangle, and each corner requires attention.

Tools and Techniques for Project Vendor Success

All tools and techniques that I will describe here should not be considered “best practices”, but situational: They may be successful in one moment, but fail in another. One has to use them with care.

Some of them relate to the project itself, but others are rather looking at the portfolio of customer projects, which may include a major number of projects done concurrently. Some may be in a bid/proposal stage, others in delivery, other again just about to be closed. Managing a group of projects in different maturity stages is a difficult task, because one has to adjust the approaches and behaviors to these stage, which means one has to change them possibly when one is moving attention from one to the other.

Tool #1: Business Assumptions Register

Vendors make many project related decisions based on assumptions. Assumptions have two disadvantageous characteristics:

1. Assumptions may be wrong. Decisions made based on them may then also be wrong assumptions.
2. People have a tendency to turn assumptions into facts, or better, “Factoids”⁶. This is particularly true, when the assumptions make the project more convenient and promise reduction of complexity and stress, cutting of costs, and saving of time. People then lose the ability to consider the risks that come from the first characteristic, uncertainty and get taken aback, when the assumptions finally prove wrong.

First decisions based on assumptions are made early in a project: The decision to respond to an *Invitation for bid* (IfB) or a *Request for proposal* (RfP), or a similar enquiry

⁶ A term coined by Norman Mailer (Mailer, 1973)

from a customer is among them⁷. Assumptions by that time will include chances to make win the business and to perform it successfully for the customer and the own organization. The vendor organization attempting to get the business will do more assumptions and base decisions on them, and so will later the project manager and his/her team. Then, assumption will not only be the basis for decisions but also for work done for the project. And – just as a reminder – assumptions may be wrong.

One of the most important documents for any project should be an *assumptions register*. This is particularly true for projects that are done for paying customers, performed as profit centers, because troubled projects can translate into a major business disaster and jeopardize the future of the organization.

An *assumptions register* (or assumptions log, list of assumptions) lists all assumptions including key data that help manage them and derive risks for them, that would then be added up to a *risk register*.

In vendor-side project business management, the utility of the assumptions register goes further than in internal project management.

As shown in Figure 4 (page 9), in addition to assumptions that relate to project management, legal and commercial assumptions are also added for use in project business management. These may not always impact the project management success, but the business success and also legal matters regarding the contractual relationship with the customer and other organizations involved.

The assumptions register ensures that assumptions are not turned into factoids and that risks are identified that are based on the possibility that assumptions are wrong. Because this is what the assumptions register is, an expression of the uncertainties that come with any project and a commitment to deal with them in a professional way.

Tool #2: Business Stakeholder Register

In internal project management, it has become common practice to have a stakeholder register. This is a list of individuals, groups, organizations, and more that the project manager should consider in decision making, as they can influence the project positively or negatively.

In project business, two or more organizations come together for a joint project as customer(s) and contractor(s). A business stakeholder does not only ask for stakeholders' potential impact on the project and its management, but also on the business of the parties and on legal matters between them.

⁷ A glossary, which describes the different terms for customer requests, for offers is in my book "Project Business Management (Lehmann, 2018, pp. 91-93)

Assumption Register

Assumption:

A factor in the planning process that is considered to be true, real, or certain, without proof or demonstration.

Project ID: 12345 Project name: Green Line 2
 Project manager: Paula Miller Project: Jane Reeves
 Project customer: Great Lakes Fishing Further

| Assumption | | | | | | | |
|------------|---|---------|----------------|--------------------|---|------------------------|--------------------|
| # | Assumption, short description | Made by | Made at (date) | Type | Decisions based on the assumption | Likelihood to be wrong | Status |
| 1 | The business can be won | James | 18-06-18 | Business | Develop and submit offer | moderate | Verified as right |
| 2 | The business is worth winning | Jane | 20-06-18 | Business | Provide a budget for proposal development | moderate | Partially verified |
| 3 | A face-to-face presentation can help win the business | James | 25-06-18 | Business | Appoint a date and develop a presentation | Very low | Verified as right |
| 4 | The contract is awarded, but it takes another two weeks to get it signed. This will happen without problems. | Paula | 01-08-18 | Legal | Start working on the project | Low | Made |
| 5 | Team positions that cannot be filled with own staff can be obtained externally | Paula | 10-08-18 | Project management | Hire external staff to support the team | High | In discussion |
| 6 | The customer has developed an internal project that will protect the business of the contractor from disruptions on customer side | James | 10-08-18 | Business | Start working on the project | High | In discussion |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

Figure 4: Assumptions Register, simple example

As a prerequisite for developing such a cross-corporate list or log of stakeholders, it is important to know the people involved and how they relate with each other. It will take a lot of observation, sometimes at the borderline to spying, to gain an understanding of the individuals and how they relate with each other, formally and informally. National cultures play a role, but also corporate culture, and there may be even a specific division or department culture. The history of people play a role and the experiences that they have made with former business partners. Write this down as a knowledge base of stakeholders.

In some countries, you will need to be careful not to get into conflict with data privacy laws, however in most cases, it hurts stakeholders more when they get ignored than when their existence is documented and their needs respected.

Tool #3: Predict Project Business Earthquakes, then Protect your Project Business with Base Isolation

Base isolation is used in Japanese construction and at a few other locations in the world, where buildings must be protected from Earthquakes⁸.

Crises in project supply networks are similar to such earthquakes in that they can shatter a number of companies in a short period of time.

Insolvency of constituents may be among them, but sometimes, organizations can simply break down due to poor management and project management. Corruption can cause the crisis, or negligence of meeting obligations. Another common cause are big egos, possibly psychopaths, who found their way into top positions, when their due place should be a rubber cell. Or, on the other end of the spectrum, wishy-washies, who do not have the strength of personality to lead a project or any of the companies involved.

Base isolation for a contractor is mostly concerned with building reserves that help absorb shocks in the project supply network without own damages.

Reserves are the difference between constraints, imposed things the team must achieve and objectives, things that the team and some more stakeholders want to achieve.

“A project manager without reserves is a feeble observer of great things happening.”

Figure 5 on page 11 shows how reserves are created:

- The constraints are there, mostly without contribution of the project manager, the project supervisors, and the team. They may stem from physics, from existing processes into which the project’s deliverables need to be integrated, from law or may be required according to a contract.

⁸ A great description with dynamic visualization is shown in an online article of The New York Times (Fuller et al., 2019)

If the project contributes to a major program, constraints may have been put in place to ensure that the work and the results of the various projects that feed into the program, are compatible and create a reliably working system.

- Objectives are defined by the project manager and other key stakeholders.

| Dimension | Objective statement | Constraint identified | Reserve |
|------------------------|---|---|--|
| Time | Start of production (SoP) has been targeted for January 01, 2019. | SoP deadline has been imposed for April 01, 2019. | ⇒ Three months schedule reserve |
| Budget | A cost estimate at project start has been approved: \$10,000,000. | There is a funding limitation of \$12,500,000. | ⇒ \$2,500,000 monetary reserve |
| Scope | 15 functions are planned as 'wanted'. | 12 functions are specified as 'critical'. | ⇒ Three 'nice-to-haves' (reserve for de-scoping) |
| Quality | Control limits: Dimension $x \pm 1$ mm | Specification limits: Dimension $x \pm 1.25$ mm | ⇒ Quality control reserve: 0.25 mm ^b |
| Resources | 10 team members have been planned. | 12 team members are available if needed. | ⇒ Two bench resources |
| Resource availability | Bill is expected to work four weeks on the task. | We have booked Bill for five weeks | ⇒ One week resource reserve |
| Operational disruption | We plan to stop production for four weeks. | Management has agreed to a production stop of a maximum five weeks. | ⇒ One reserve week for the project |
| Procurement | The contract has been awarded to a contractor. | A second contractor is on standby for a fee. | ⇒ One backup contractor |
| | The delivery has been ordered for 1 April. | The delivery will be needed for the project on 8 April. | ⇒ Eight days feeding buffer |
| Risk | The work package is planned for \$10,000,000. | An insurance has been bought to hedge the project from losses from certain risks. | ⇒ The benefit of the insurance ^c |
| Safety | The power plant must be protected from a 3.7 m tsunami. | The power plant has been built on a location 10 m above sea level. | ⇒ 6.3 m safety reserve |

Figure 5: Reserves are the difference between objectives and constraints.⁹

The example of seismic protection in construction shows another aspect of reserves: Project reserves are not free. They come with blocked resources and additional costs. However, the damage that is to be expected without these reserves will be much higher. Apple designer Jony Ive, who was co-responsible for using the technology to make the company's new headquarter earthquake-proof using the technology is quoted in the article:

“We would have seen it as utterly bizarre not to protect our investment.”

⁹ (Lehmann, 2018, p. 228)

Tool #4: Benefit Engineering

I described this technique in detail in my 2017 article for the PM World Journal¹⁰ magazine. The fundamental approach is to discuss changes in deadlines, pricing, acceptable operational disruptions on customer side, technical constraints and many more with the customer, having some benefits for the customer had hand that are of sufficient value to convince the customer to do the change. It is a win-win approach, a give and take that, when it is done well, increases the bonds with the customer while improving the business benefit for the own organization.

However, benefit engineering must be done with care and diligence, based on in-depth knowledge of the customer and the own organization. If the customer feels that the contractor intends to bring help, they will listen. If not, they will consider it an attempt to rip them off.

Tool #5: When Possible, Always Plan Ramp-Ups

A frequent cause for failed projects is the rejection to run ramp-up phases for project deliverables, during which errors are detected and time and people are available to fix them before their use gets into full speed.

An example are airports.

- Munich airport moved in 1992 the entire airport. The circumstances did not allow for a careful ramp up at the new location, it needed to be done in “Big bang” mode, finishing all operations at the old airport on 16 May and successfully starting full operations on 17 May¹¹.
- In 2008, British Airways and British Airport Authorities had just opened the new Terminal 5 (dubbed T5) in London Heathrow, when the whole operations fell apart and in its wake the operation of British Airways. It lead to an existential crisis for the airline that took months to resolve. A ramp-up phase would have been easily possible, however management considered it neglectable. The damage for the business of the two organizations was a direct consequence of this decision.¹²
- On 15 September 2006, Bangkok opened its new Suvarnabhumi Airport with a limited number of flights concurrently to the old Don Mueang airport. The capacity was then raised in steps until the airport went into full service mode on 28 September, the date when Don Mueang was closed¹³.

Heathrow T5 is an example, how an unnecessary “Big bang” start of production can lead into disaster. There are limitations of testability of complex systems, and when unexpected problems occur, no operational reserves are in place in form of time, people, equipment, etc. to fix them and avoid operational breakdown.

¹⁰ (Lehmann, 2017)

¹¹ (Munich Airport, 2002)

¹² (BBC News, 2008)

¹³ Don Muang was re-opened in 2007, to provide additional airport capacity.

As a contractor, you do not want to take the blame for operational failure of your customer, caused by your project work. Operational productions and services to day are created to produce high income in short periods of time, and you do not want to take the risk of being held accountable, possibly in form of a lawsuit, when they do not get realized.

As Shakespeare wrote: "Too swift arrives as tardy as slow"

Conclusion

Project Business Management adds business and legal requirements to project management requirements. Project managers are often not sufficiently educated for these additional necessities, that stem from the need to make the customer happy, ensuring profitability of the own organization and taking care of its liquidity.

One help can be some tools described above that can be immediately applied. On top of that, however, with the current lack of education in the field, project business managers still have to learn the needed skills through trial and error.

Trial in project business is expensive.

Error even more.

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He has been a member and volunteer at PMI, the Project Management Institute, since 1998, and serves currently as the President of the PMI Southern Germany Chapter. Between 2004 and 2006, he contributed to PMI's *PM Network* magazine, for which he provided a monthly editorial on page 1 called "Launch", analyzing troubled projects around the world.

Oliver believes in three driving forces for personal improvement in project management: formal learning, experience and observations. He resides in Munich, Bavaria, Germany and can be contacted at oliver@oliverlehmann.com.

Oliver Lehmann is the author of the books:

- ["Situational Project Management: The Dynamics of Success and Failure"](#) (ISBN 9781498722612), published by Auerbach / Taylor & Francis in 2016
- ["Project Business Management"](#) (ISBN 9781138197503), published by Auerbach / Taylor & Francis in 2018.